

CLAIMS

1. A DNA molecule comprising:
 - 5 (a) a region coding for a polypeptide which is human BSSL or a biologically active variant thereof;
 - (b) joined to the 5'-end of said polypeptide coding region, a region coding for a signal peptide capable of directing secretion of said polypeptide from *Pichia pastoris* cells transformed with said DNA molecule; and
 - 10 (c) operably-linked to said coding regions defined in (a) and (b), the methanol oxidase promoter of *Pichia pastoris* or a functionally equivalent promoter.
- 15 2. A DNA molecule according to claim 1 wherein the said signal peptide is identical to, or substantially similar to, the peptide with the amino acid sequence shown as amino acids -20 to -1 of SEQ ID NO: 2 in the Sequence Listing.
- 20 3. A DNA molecule according to claim 1 wherein the said signal peptide comprises a *Saccharomyces cerevisiae* invertase signal peptide.
- 25 4. A DNA molecule according to any one of claims 1 to 3 encoding a biologically active variant of human BSSL in which at least one of the repeat units of 11 amino acids, said repeated units being indicated in SEQ ID NO: 1, is deleted.
- 30 5. A DNA molecule according to any one of claims 1 to 4 coding for a polypeptide which has BSSL activity and an amino acid sequence which is at least 95% homologous with the sequence according to SEQ ID NO: 3 or SEQ ID NO: 4.

6. A DNA molecule according to any one of claims 1 to 5 coding for a polypeptide which has the amino acid sequence according to SEQ ID NO: 3 or SEQ ID NO: 4.
- 5 7. A vector comprising a DNA molecule according to any one of claims 1 to 6.
8. A replicable expression vector according to claim 7 which is capable of mediating expression of human BSSL, or a biologically
10 active variant thereof, in *Pichia pastoris* cells.
9. A vector according to claim 8 which is the plasmid vector pARC 5771 (NCIMB 40721), pARC 5799 (NCIMB 40723) or pARC 5797 (NCIMB 40722).
- 15 10. Host cells of the genus *Pichia* transformed with a vector according to any one of claims 7 to 9.
11. Host cells according to claim 10 which are *Pichia pastoris* cells.
- 20 12. Host cells according to claim 11 which are *Pichia pastoris* cells of the strain GS115.
13. Host cells according to claim 12 which are PPF-1[pARC 5771]
25 (NCIMB 40721), GS115[pARC 5799] (NCIMB 40723) or GS115[pARC 5797] (NCIMB 40722).
14. A process for the production of a polypeptide which is human BSSL, or a biologically active variant thereof, which comprises
30 culturing host cells according to any one of claims 10 to 13 under conditions whereby said polypeptide is secreted into the culture

medium, and recovering said polypeptide from the culture medium.